

# **Active Screening of Inapparent Dengue Virus Infection among Monastic School Students in Mandalay in 2018**

Aung Kyaw Kyaw\*, Shine Thura Naing, Thida, Thein Thein Htwe, Tu Tu Mar, Tin Moe Khaing, Thidar Aung, Khin Saw Aye, Kyaw Zin Thant

<sup>1</sup> **Department of Medical Research (Pyin Oo Lwin Branch)**

Programme & Abstract, 47<sup>th</sup> Myanmar Myanmar Health Research Congress, 2019

## **Abstract**

Inapparent dengue infection (DEN) is defined as a dengue virus (DENV) infection with no clinical manifestations or mild symptoms which is not associated to visit to a health care provider or an absence from school or work due to illness. A school- and laboratory-based cross-sectional descriptive study was conducted to find out the burden of inapparent dengue virus in Mandalay at the peak dengue season of 2018. Total 420 students who had no history of visiting a hospital or clinic within 6 months were recruited from three selected Monastic Education Schools. Single phase serum samples were collected and DENV genome was checked by one step Reverse Transcription Polymerase Chain Reaction (RT-PCR) and anti - DENV IgM and IgG Antibodies were determined using IgM/IgG capture ELISA (Panbio, Australia). Among 420 students, 38 students (9.0%, 95% CI 6.4%-12.2%) were confirmed as recent inapparent DEN infection which showed positive on either RT PCR or anti DENV IgM. The inapparent DENV infection rate at Salay Monastic School, Kantetkone Monastic School and Phaungdawoo Monastic School were 2.5% (95% CI 0.5%-7.2%), 11.1% (95% CI 5.7%-19.1%) and 11.8% (95% CI 7.7%-12.1%), respectively. Dengue Virus serotype-1 (DENV-1) was detected in six students. Thirty one out of 38 (81.6%) laboratory confirmed inapparent DEN infected students were primary infection and 7/38 (18.4%) were secondary infection. Most of the affected children belonged to 9-14 years age group. In conclusion, this

study explored the high prevalence of inapparent dengue infection rate at urban area, Mandalay during 2018 and highlighted that the rate of primary infection among inapparent DENV infected children was high.